

A. Permit Certificate

**INDUSTRIAL
WASTEWATER-LAND APPLICATION PERMIT
LA-000040-02**

**Basic American Foods, Inc., LOCATED AT 245 W. 100 North,
Rexburg, Idaho 83440 AND IN Madison County (Plant Farm and
Salem Farm) and Fremont County (Salem Farm); Township T6N,
Range R40E, Sections 18 and 19 (Facility and Plant Farm); and
Township T7N, Range R40E, Sections 27, 28, and 33 (Salem Farm) IS**
HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND
OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE
WITH THE WASTEWATER REUSE RULES (IDAPA 58.01.17) AND
WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER
QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT,
APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS
EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON
(60 months from issue date).

DRAFT

DRAFT

James Johnston, Regional Administrator
Idaho Falls Regional Office
Idaho Department of Environmental Quality

Date:

**DEPARTMENT OF ENVIRONMENTAL QUALITY
900 N. Skyline, Ste B
Idaho Falls, ID 83301
(208) 528-2650**

POSTING ON SITE RECOMMENDED

B. Permit Contents, Appendices, and Reference Documents

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Appendices

1. Environmental Monitoring Serial Numbers
2. Site Maps

References

1. Plan of Operation (Operation and Maintenance Manual)
 - Nuisance Odor Management Plan
 - Waste Solids Management Plan (See Section E, CA-040-02)
 - Quality Assurance Plan (See Section E, CA-040-03)
 - Site Remediation Plan (See Section E, CA-040-05)
 - Ground Water Characterization Plan (See Section E, CA-040-07)
 - Runoff Management Plan (See Section E, CA-040-09)

The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000040-02 and are enforceable as such. This permit does not relieve Basic American Foods, Inc., hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

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C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – Typically April 01 through October 31 (214 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 “Ground Water Quality Rule”
Guidance	Guidance for Land Application of Municipal and Industrial Wastewater
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to land application hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	<p>Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop:</p> $IWR = IR / E_i = (CU - P_e) / E_i \text{ Where:}$ <p>IR = net irrigation requirement = $CU - P_e$ CU = consumptive use (<u>crop evapotranspiration</u>) for a given crop in a given climatic area P_e = effective precipitation. E_i = irrigation system efficiency.</p>
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – Typically November 01 through March 31 (151 days)
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation
SAR	Sodium Absorption Ratio

C. Abbreviations, Definitions

SI	Supplemental Irrigation water applied to the land application treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 <i>Water Quality Standards and Wastewater Treatment Requirements</i>
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year, typically November 01 – October 31. For example, the 2006 Reporting Year would be November 01, 2005 through October 31, 2006.
WW	Wastewater applied to the land application treatment site

D. Facility Information

Legal Name of Permittee	Basic American Foods, Inc.
Type of Wastewater	Potato Processing Wastewater
Method of Treatment	Land Treatment
Type of Facility	Potato Processor
Facility Location	245 W. 100 North, Rexburg, Idaho 83440
Legal Location	<u>Facility and Plant Farm</u> : Township T6N, Range R40E, Sections 18 and 19; <u>Salem Farm</u> : Township T7N, Range R40E, Sections 27, 28, 33
County	Madison and Fremont
USGS Quad	1949 7.5 Min Quadrangle Rexburg, ID (revised 1979) and 1948 7.5 Quadrangle Parker, ID and 1950 7.5 Quadrangle St. Anthony, ID (both revised 1979)
Soils on Site	<u>Plant Farm</u> : Upper Terrace- Sandy loam (>60 inches); Lower Terrace- Gravelly sandy loam to very gravelly sandy loam (>60 inches), some areas of clay loam and fine loamy sand. <u>Salem Farm</u> : St. Anthony gravelly sandy loam (>50 inches).
Depth to Ground Water	<u>Plant Farm</u> : 5-10 feet, varies seasonally <u>Salem Farm</u> : 10-15 feet, varies seasonally
Beneficial Uses of Ground Water	Drinking Water, Irrigation Water for Agriculture
Nearest Surface Water	<u>Plant Farm</u> : The South Fork of the Teton River runs along the southern border and a portion of the western border of the farm. <u>Salem Farm</u> : The North Fork of the Teton River runs 0.5 miles to the south and North Fork of the Snake River (Henry's Fork) is located 2 miles to the north.
Beneficial Uses of Surface Water	Agricultural Irrigation, Cold Water Biota, Salmonid Spawning, Secondary Contact Recreation (IDAPA 58.01.02.150.06)
Responsible Official Mailing Address	Nelson Rovig 415 W. Collins Rd Blackfoot, Idaho 83221
Phone / Fax	208-785-3200/208-785-8392
Environmental Manager Mailing Address	John Kirkpatrick 415 W. Collins Rd. Blackfoot, Idaho 83221
Phone / Fax	208-785-8572 / 208-785-8392

E. Compliance Schedule for Required Activities

The *Activities* in the following table shall be completed on or before the *Completion Date* unless modified by the Department in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-040-01 Six (6) Months after Permit Issuance	A Plan of Operation (Operation and Maintenance Manual or O&M Manual) for the wastewater reuse facilities, incorporating the requirements of this permit, shall be submitted to DEQ for review and approval. The O&M manual shall be designed for use as an operator guide for actual day-to-day operations to meet permit requirements and shall include daily sampling and monitoring requirements to ensure proper operation of the wastewater treatment facility. The Plan of Operation shall contain at a minimum all of the information required by the latest revision of the Plan of Operation Checklist in the Reuse Program Guidance.
CA-040-02 Six (6) Months after Permit Issuance	A Waste Solids Management Plan shall be submitted to DEQ for review and approval which describes how waste solids generated at the facility will be handled and disposed of to meet the requirements of Section I, No. 5.
CA-040-03 Six (6) Months after Permit Issuance	A Quality Assurance Project Plan (QAPP) for monitoring required in this permit. The plan shall be submitted to DEQ for review and approval and cover field activities; laboratory analytical methods and other activities; data verification and validation; data storage, retrieval and assessment; and monitoring program evaluation and improvement.
CA-040-04 Twelve (12) Months after Permit Issuance	<p>Perform seepage test on each new mud settling lagoon (each side individually) in accordance with the latest DEQ procedure. The maximum leakage rate for each lagoon shall be no more than one-eighth (1/8" or 0.125) inches per day.</p> <p>If either lagoon is found to be leaking at a rate greater than 0.125 inches per day, the facility, in accordance with a schedule negotiated with and approved by the Director, shall perform one of the following:</p> <ol style="list-style-type: none"> Repair the leak and retest for compliance; Drain the lagoon in an approved manner and discontinue its use; or Determine the impact of the leaking lagoon on the environment based on modeling and ground water sampling immediately surrounding the lagoons. Any impacts must comply with IDAPA 58.01.11 "Ground Water Quality Rule," and IDAPA 58.01.02, "Water Quality Standards." If the impact does not comply with IDAPA 58.01.11, "Ground Water Quality Rule," and IDAPA 58.01.02, "Water Quality Standards," as determined by DEQ, the facility shall follow either step a. or b., above.
CA-040-05 Eight (8) months after	A Site Remediation Plan for field A-7 (MU-004012) of the Plant Farm shall be submitted to DEQ for review and approval, which includes 1) an assessment of

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
Permit Issuance	previous environmental data pertinent to the remediation of the site, 2) an evaluation of adequacy of environmental monitoring requirements to determine site status; 3) environmental quality goals for soils to be met prior to employing the field for wastewater land application purposes; 4) a site cropping plan, 5) an analysis of expected environmental impacts from use of field A-7 for wastewater land application; and 6) other management operations necessary for remediation of the site. The plan shall include implementation schedule.
CA-040-06 Eighteen (18) Months after Permit Issuance	All ground water monitoring wells listed in Appendix 1 shall be surveyed by a Professional Land Surveyor licensed in Idaho and the results provided to DEQ. Horizontal locations shall be specified using the Public Land Survey system with accuracy to the nearest third quarter (i.e. Township, Range, Section, ¼, ¼, ¼). Vertical locations to top of casing shall be determined relative to a universally recognized vertical datum and specified to an accuracy of plus/minus one-hundredth of a foot (± 0.01 ft).
CA-040-07 Eight (8) Months after Permit Issuance submit construction plans Eighteen (18) Months after Permit Issuance complete construction	A Ground Water Characterization Plan which includes the following: 1) FM Series wells, as well as T Series wells T-5 through T-10, be recompleted, or new wells drilled, so the wells yield samples throughout the year and be sampled as close to the water table as possible, 2) proposed wells FM-5, FM-6, FM-7, and FM-8 be completed in a similar manner, 3) plans and specifications for both the proposed wells and the updates to the current FM series wells be submitted to DEQ for approval prior to construction
CA-040-08 Eight (8) Months after Permit Issuance	Submit to the Department for review and approval, a well location acceptability analysis, as outlined in the <i>Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater</i> for all applicable wells located around or on the reuse sites.
CA-040-09 Eight (8) Months after Permit Issuance	Basic American Foods (BAF) shall prepare and submit to DEQ for approval a Runoff Management Plan with control structures and other BMPs (e.g. collection basins, berms, etc.) designed to prevent runoff from any site or fields used for wastewater reuse to property not owned by BAF except in the event of a 25-year, 24-hour storm event or greater, using Western Regional Climate Center (WRCC) Precipitation Frequency Map, Figure 28, 'Isopluvials of 25-YR, 24-HR Precipitation'. For this site, the 25-year, 24-hour event is 2.2 inches. Upon approval of the plan by DEQ, BAF shall implement the runoff management plan, and shall construct, operate, and maintain the control structures and other BMPs in accordance with the plan.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions																																																																								
Type of Wastewater	Potato Processing Wastewater																																																																								
Application Site Area	Plant Farm: 202.7 acres Salem Farm: 519.5 acres Total: 722.2 acres																																																																								
Application Season	365 days/year																																																																								
Growing Season (GS)	April 1 through October 31 (214 days)																																																																								
Non-growing Season (NGS)	November 1 through March 31 (151 days)																																																																								
Reporting Year for Annual Loading Rates	November 1 through October 31																																																																								
Growing Season Hydraulic Loading Rate, each HMU (Applies to wastewater and supplemental irrigation water).	<p>Growing Season (GS) Hydraulic Loading Rate shall be substantially equal to the Irrigation Water Requirement (IWR) based upon the most current crop-specific evapotranspiration (ET_c) data** available from the U.S. Bureau of Reclamation Rexburg, Idaho AgriMet Station (RXGI), available at www.usbr.gov/pn/agrimet/ETtotals.html.</p> <p>The IWR shall be calculated by dividing the crop-specific ET_c, determined above, by the specific irrigation efficiency (E_i) of each HMU as follows:</p> $IWR = ET_c/E_i$ <p>**Alfalfa <u>Reference</u> ET (ET_r) values shall not be used to calculate IWR.</p>																																																																								
Non-Growing Season Maximum Hydraulic Loading Rate	<p>NGS Maximum Hydraulic Loading Rates-Plant Farm</p> <table><tr><th>HMU</th><th>Acres</th><th>in/ac</th><th>MG</th></tr><tr><td>A-1 (MU-004001)</td><td>25.3</td><td>13.9</td><td>9.5</td></tr><tr><td>A-2 (MU-004002)</td><td>47.8</td><td>13.9</td><td>18.0</td></tr><tr><td>A-3 (MU-004003)</td><td>29.0</td><td>13.9</td><td>11.0</td></tr><tr><td>A-4 (MU-004004)</td><td>22.7</td><td>9.2</td><td>5.7</td></tr><tr><td>A-5 (MU-004005)</td><td>24.4</td><td>6.9</td><td>4.6</td></tr><tr><td>A-6 (MU-004006)¹</td><td>----</td><td>zero</td><td>zero</td></tr><tr><td>C-1 (MU-004008)</td><td>4.5</td><td>5.9</td><td>0.7</td></tr><tr><td>C-2 (MU-004009)</td><td>13.4</td><td>13.9</td><td>5.1</td></tr><tr><td>C-3 (MU-004010)</td><td>8.5</td><td>13.9</td><td>3.2</td></tr><tr><td>C-4 (MU-004011)</td><td>9.5</td><td>13.9</td><td>3.6</td></tr><tr><td>Total (Acres):</td><td>185.7</td><td>Total (MG):</td><td>61.4</td></tr></table> <p>1. A-6 is to be used for growing season application only</p> <p>NGS Maximum Hydraulic Loading Rates- Salem Farm</p> <table><tr><th>HMU</th><th>Acres</th><th>in/ac</th><th>MG</th></tr><tr><td>S-1 (MU-004021)</td><td>119.0</td><td>7.4</td><td>23.9</td></tr><tr><td>S-2 (MU-004022)</td><td>122.3</td><td>7.4</td><td>24.6</td></tr><tr><td>S-3 (MU-004023)</td><td>120.3</td><td>7.4</td><td>24.2</td></tr><tr><td>S-5 (MU-004025)</td><td>58.4</td><td>7.6</td><td>12.1</td></tr><tr><td>S-6 (MU-004026)</td><td>40.0</td><td>7.4</td><td>8.0</td></tr></table>	HMU	Acres	in/ac	MG	A-1 (MU-004001)	25.3	13.9	9.5	A-2 (MU-004002)	47.8	13.9	18.0	A-3 (MU-004003)	29.0	13.9	11.0	A-4 (MU-004004)	22.7	9.2	5.7	A-5 (MU-004005)	24.4	6.9	4.6	A-6 (MU-004006) ¹	----	zero	zero	C-1 (MU-004008)	4.5	5.9	0.7	C-2 (MU-004009)	13.4	13.9	5.1	C-3 (MU-004010)	8.5	13.9	3.2	C-4 (MU-004011)	9.5	13.9	3.6	Total (Acres):	185.7	Total (MG):	61.4	HMU	Acres	in/ac	MG	S-1 (MU-004021)	119.0	7.4	23.9	S-2 (MU-004022)	122.3	7.4	24.6	S-3 (MU-004023)	120.3	7.4	24.2	S-5 (MU-004025)	58.4	7.6	12.1	S-6 (MU-004026)	40.0	7.4	8.0
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A-6 (MU-004006) ¹	----	zero	zero																																																																						
C-1 (MU-004008)	4.5	5.9	0.7																																																																						
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F. Permit Limits and Conditions

Category	Permit Limits and Conditions			
	K-1 (MU-004027)	9.0	7.4	1.8
	K-2 (MU-004028)	7.5	7.4	1.5
	K-3 (MU-004029)	17.0	7.4	3.4
	K-4 (MU-004030)	26.0	7.4	5.2
	Total (Acres):	519.5	Total (MG):	104.7
Maximum Non-Volatile Dissolved Solids (NVDS) Loading Rate Limit, pounds/acre-year, each HMU	4,500 pounds / acre - year			
Livestock Grazing	Grazing not allowed			
Ground Water Quality	Ground water quality shall be in compliance with the Ground Water Quality Rule (GWQR), IDAPA 58.01.11			
Maximum COD Loading, seasonal average in Pounds/acre-day, each HMU	50 pounds / acre-day seasonal average for growing season. 25 pounds / acre-day seasonal average for the non-growing season.			
Maximum Nitrogen Loading Rate, pounds/acre-year, each HMU (from all sources including waste solids and supplemental fertilizers)	150% of typical crop uptake (see Section C definitions)			
Maximum Phosphorus Loading Rate, pounds/acre-year (from all sources including waste solids and supplemental fertilizers)	No limit at this time DEQ reserves the right to re-open this permit for inclusion of phosphorous limits.			
Sampling and Monitoring Requirements	For permit compliance purposes, constituent mass loading shall be calculated using monthly hydraulic flows and monthly constituent concentrations obtained from an independent, outside laboratory. These values shall subsequently be the basis of the calculations for the summary reports required in Table G-1. Any "in-house" wastewater quality evaluations performed by the permittee shall not be eligible for use in determining permit compliance, but shall be included as supplementary information in the Annual Report, as required by Section G.4. of this permit.			
Construction Plans	Prior to construction or modification of all wastewater facilities associated with the land application system or expansion, detailed plans and specifications shall be submitted for review and approved by DEQ. Within 30 days of completion of construction, the permittee shall submit as-built plans for DEQ review and approval.			

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Buffer Zones	<p>All buffer zones must comply with, at minimum, local zoning ordinances. Other minimum buffer zones are as follows:</p> <ul style="list-style-type: none"> • 300 ft from reuse site and inhabited dwellings • 50 ft from reuse site and areas accessible by the public • 100 ft from reuse site and permanent and intermittent surface water • 50 feet from reuse site and irrigation ditches and canals • 500 feet from reuse site and private water supply wells • 1000 feet from reuse site and public water supply wells • Berms and other BMPs shall be used to protect the well head of on-site wells. <p>Any mitigation measures to reduce buffer zone distances shall be submitted to and approved by DEQ prior to use.</p>
Supplemental Irrigation Water Protection	For systems with wastewater and fresh irrigation water interconnections, DEQ-approved backflow prevention devices are required.
Odor Management	The land application facilities and other operations associated with the facility shall not create a public health hazard or nuisance conditions including odors. These facilities shall be managed in accordance with the most recent DEQ approved Odor Management Plan. In the event that nuisance odors, verified by DEQ, occur, the Plan shall be revised as necessary, and implemented by the permittee, to eliminate or minimize the reoccurrence of nuisance odors.
Fencing and Posting	None Required
Runoff Control	Runoff shall be managed in accordance with the most recent Runoff Management Plan approved by DEQ. See Section E, CA-040-09 for more information.
Allowable Crops	Crops grown for direct human consumption (those crops that are not processed prior to consumption) are not allowed.

G. Monitoring Requirements

The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the table below and in accordance with all other applicable permit conditions and schedules.

- 1) Appropriate analytical methods, as given in the *Idaho Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the facility's Quality Assurance Project Plan (QAPP).
- 2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Table in this section.
- 3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 4) Unless otherwise agreed to in writing by DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table on the following pages. Wastewater monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown.
- 5) Ten (10) soil sample locations shall be selected for each Soil Monitoring Unit (SMU) with greater than fifteen acres and Five (5) soil sample locations shall be selected for each SMU with fifteen acres or less. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches, or refusal. The soil samples collected at each depth shall be composited to yield three (3) samples for analysis from each SMU.
- 6) Ground Water Monitoring Procedure: Ground Water Monitoring Wells shall be purged a minimum of three casing volumes and/or until field measurements for pH, specific conductance and temperature meet the following conditions: two successive temperature values measured at least five minutes apart are within one degree Celsius of each other, pH values for two successive measurements measured at least five minutes apart are within 0.2 units of each other, and two successive specific conductance values measured at least five minutes apart are within 10% of each other. This procedure will determine when the wells are suitable for sampling for constituents required by the permit. Other procedures, such as low flow sampling, may be considered by DEQ for approval. The static water level shall be measured prior to pumping or sampling for ground water.
- 7) Surface water sampling guidance (for supplemental irrigation sampling): DEQ to review and approve methods, timing and locations for sampling prior to initial sampling event.
- 8) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.
- 9) Monitoring locations are defined in Appendix 1, "Environmental Monitoring Serial Numbers".

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G. Monitoring Requirements

Table G-1. Facility Monitoring Table

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Daily	Flow meter	Flow of wastewater to each HMU	Volume (million gallons and acre-inches) to each hydraulic management unit (HMU), record daily, compile monthly
Monthly	Effluent to land application	Wastewater quality into land application system – 24-hr. Composite	Chemical Oxygen Demand, Total Kjeldahl Nitrogen, Ammonia-Nitrogen, Nitrite + Nitrate-Nitrogen, Total Phosphorus, Chloride, Electrical Conductivity, Potassium, pH, Total Dissolved Solids (TDS), Volatile Dissolved Solids (VDS)
Daily	Flow meter or Calibrated Pump Rate	Supplemental Irrigation Water	Volume (million gallons and acre-inches) to each HMU, record daily, compile monthly
May and October of first permit year	Supplemental Irrigation at diversions and/or production wells	Grab sample	Nitrate + Nitrite Nitrogen, Total Phosphorus, Total Dissolved Solids, Volatile Dissolved Solids, Chloride, Total Kjeldahl Nitrogen
April, July, and October of each year	Ground Water monitoring wells, listed in Appendix 1	Ground Water- See Note 6	Water Table Elevation, Water Table Depth, Nitrate-Nitrogen, Ortho Phosphorus, Total Dissolved Solids, Total Iron, Total Manganese, Chloride, Dissolved Iron ¹ , Dissolved Manganese ¹ , pH, Conductivity, and Temperature. Submit Ground Water Contour Maps for each sample event with the Annual Report.
Annually (April)	SMUs listed in Appendix 1	Soil - See note 5	Electrical Conductivity, Nitrate-Nitrogen, Ammonium Nitrogen, Plant Available Phosphorus, pH, % organic matter, potassium, and SAR. Note: Conduct DTPA Fe and Mn analyses April 2007 and 2011 only

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Annually	HMUs listed in Appendix 1	Calculate both GS and NGS wastewater loading rate	Million gallons/HMU & Inches/acre for each HMU
		Calculate Season-Specific Irrigation Water Requirement for comparison with GS hydraulic loading.	Inches/acre-month for each crop type
		Calculate seasonal average COD loading rate for both GS and NGS	Pounds/acre-day
		Calculate wastewater nitrogen, phosphorus, and NVDS loading rates	Pounds/acre-year
		Report nitrogen and phosphorus fertilizer application rates	Type and Pounds/acre-year
		Calculate nitrate-nitrogen, phosphorus, and NVDS loading rates from supplemental irrigation application.	Pounds/acre-year
		Calculate nitrogen and phosphorus application rates from waste solids	Pounds/acre-year
Annually	HMUs listed in Appendix 1		
Each Harvest or Cutting	HMUs listed in Appendix 1	Crop type and yield, each crop, each harvest, on each HMU	Pounds/acre and total pounds per HMU (both wet and dry basis)

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Each Harvest or Cutting	HMUs listed in Appendix 1	Plant tissue analysis: Composite sample of harvested portion for each crop, each harvest, on each HMU	Nitrate-nitrogen, Total Kjeldahl Nitrogen, Total Phosphorus, ash (dry basis)
		Calculate crop nitrogen, phosphorus, and ash removal for each crop, each harvest, on each HMU	Pounds/acre and total pounds per HMU (dry basis). Compile each harvest and annual totals.
First Year of Permit, and after replacement or modification of meter & associated piping	All flow measurement locations.	Flow measurement calibration of all flows to land application.	Document the flow measurement calibration of all flow meters and pumps used to directly or indirectly measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied to each HMU.
Annually	All supplemental irrigation pumps directly connected to the wastewater distribution system.	Backflow testing	Document the testing of all backflow prevention devices for all supplemental irrigation pumps directly connected to the wastewater distribution system(s). Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly.
April of first and last years of permit	Groundwater Monitoring Wells listed in Appendix 1.	Grab sample (See Note 6).	Sodium, Potassium, Calcium, Magnesium, Sulfate, carbonate, bicarbonate.

H. Standard Reporting Requirements

- 1.) The Permittee shall submit an Annual Wastewater Reuse Site Performance Report (“Annual Report”) prepared by a competent environmental professional no later than January 31 of each year, which shall cover the previous reporting year. The Annual Report shall include an interpretive discussion of monitoring data (ground water, soils, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
- 2.) The annual report shall contain the results of the required monitoring as described in *Section G. Monitoring Requirements*. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report. The report shall also include ground water contour map(s) for each ground water monitoring event during the reporting year, as specified in Table G-1.
- 3.) The annual report shall be submitted to the Engineering Manager in the following Regional DEQ Office.

Greg Eager, P.E.
Idaho Falls Regional Office
900 N. Skyline, Suite B
Idaho Falls, ID 83402
208-528-2650

A copy of the annual report shall also be mailed to:

Richard Huddleston, P.E.
Wastewater Program Manager
1410 N. Hilton
Boise, ID 83706
208-373-0561

- 4.) Notice of completion of any work described in *Section E. Compliance Schedule for Required Activities* shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.
- 5.) All laboratory reports containing the sample results for monitoring required by *Section G. Monitoring Requirements* of this permit shall be submitted with the Annual Report.

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I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
 - a. Apply wastewater as evenly as practicable to the treatment area;
 - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
 - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. The permittee shall:
 - a. Manage the wastewater reuse treatment site as an agronomic operation where vegetative cover is grown and harvested to utilize the nutrients and minerals in the wastewater, and,
 - b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.
5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.
7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
 - a. Enter the permitted facility,
 - b. Inspect any records that must be kept under the conditions of the permit.
 - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
 - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
 - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
 - b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
 - c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

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I. Standard Permit Conditions: Procedures and Reporting

DEQ Regional Office: see Permit Certificate Page
Emergency 24 Hour Number: 1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:
 - i. A description of the non-compliance and its cause;
 - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
 - iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
 - e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
 10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

J. Standard Permit Conditions: Modifications, Violation, and Revocation

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in Section I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Wastewater Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.
8. If, pursuant to Idaho Code, 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

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Appendix 1

Environmental Monitoring Serial Numbers

HYDRAULIC MANAGEMENT UNITS

Current Serial Number	Description	Acres
MU-004001	Field A-1 at Plant Farm	25.3
MU-004002	Field A-2 at Plant Farm	47.8
MU-004003	Field A-3 at Plant Farm	29.0
MU-004004	Field A-4 at Plant Farm (Formerly Field A-4a)	22.7
MU-004005	Field A-5 at Plant Farm (Formerly Field A-4b)	24.4
MU-004006	Field A-6 at Plant Farm (Formerly Field A-5)	17.6
<MU-004007>	<Field A-7 at Plant Farm> Potential Future Site. Not Permitted for Wastewater Reuse.	<n/a>
MU-004008	Corner C-1 at Plant Farm	4.5
MU-004009	Corner C-2 at Plant Farm	13.4
MU-004010	Corner C-3 at Plant Farm	8.5
MU-004011	Corner C-4 at Plant Farm	9.5
	Plant Farm Total:	202.7
MU-004021	Field S-1 at Salem Farm	119.0
MU-004022	Field S-2 at Salem Farm	122.3
MU-004023	Field S-3 at Salem Farm	120.3
<MU-004024>	<Field S-4 at Salem Farm> Potential Future Site. Not Permitted for Wastewater Reuse.	<n/a>
MU-004025	Field S-5 at Salem Farm	58.4
MU-004026	Field S-6 at Salem Farm	40.0
MU-004027	Corner K-1 at Salem Farm	9.0
MU-004028	Corner K-2 at Salem Farm	7.5
MU-004029	Corner K-3 at Salem Farm	17.0
MU-004030	Corner K-4 at Salem Farm	26.0
	Salem Farm Total:	519.5
	Grand Total:	722.2

Notes:

- 1) Acreage values in this table are from Figure 1-2 and Figure 1-3, HDR dated 11/15/2006, and are the acreage values used in this permit for compliance and enforcement purposes.
- 2) Permit compliance will be determined based on actual acreage used, if it is less than shown in HMU table.

WASTEWATER SAMPLING POINTS

Serial Number	Description
WW-004001	At Main Surge Tank prior to land application

Appendix 1

Environmental Monitoring Serial Numbers

SOIL MONITORING UNITS

Current Serial Number	Description	Current Associated MU
SU-004001	Field A-1 at Plant Farm	MU-004001
SU-004002	Field A-2 at Plant Farm	MU-004002
SU-004003	Field A-3 at Plant Farm	MU-004003
SU-004004	Field A-4 at Plant Farm (Formerly Field A-4a)	MU-004004
SU-004005	Field A-5 at Plant Farm (Formerly Field A-4b)	MU-004005
SU-004006	Field A-6 at Plant Farm (Formerly Field A-5)	MU-004006
SU-004007	<Field A-7 at Plant Farm> Potential Future Site. Not Permitted for Wastewater Reuse.	MU-004007
SU-004008	Corner C-1 at Plant Farm	MU-004008
SU-004009	Corner C-2 at Plant Farm	MU-004009
SU-004010	Corner C-3 at Plant Farm	MU-004010
SU-004011	Corner C-4 at Plant Farm	MU-004011
SU-004021	Field S-1 at Salem Farm	MU-004021
SU-004022	Field S-2 at Salem Farm	MU-004022
SU-004023	Field S-3 at Salem Farm	MU-004023
<SU-004024>	<Field S-4 at Salem Farm> Potential Future Site. Not Permitted for Wastewater Reuse.	<MU-004024>
SU-004025	Field S-5 at Salem Farm	MU-004025
SU-004026	Field S-6 at Salem Farm	MU-004026
SU-004027	Corner K-1 at Salem Farm	MU-004027
SU-004028	Corner K-2 at Salem Farm	MU-004028
SU-004029	Corner K-3 at Salem Farm	MU-004029
SU-004030	Corner K-4 at Salem Farm	MU-004030

GROUND WATER MONITORING

Serial Number	Description (private, irrigation, dedicated monitoring)	Activity Status
GW-004001	Monitoring Well T-1 at Plant Farm	Active
GW-004002	Monitoring Well T-2 at Plant Farm	Active
GW-004003	Monitoring Well T-3 at Plant Farm	Active
GW-004004	Monitoring Well T-4 at Plant Farm	Active
GW-004005	Monitoring Well T-5 at Plant Farm	Active
GW-004006	Monitoring Well T-6 at Plant Farm	Active
GW-004007	Monitoring Well T-7 at Plant Farm	Active
GW-004008	Monitoring Well T-8 at Plant Farm	Active
GW-004009	Monitoring Well T-9 at Plant Farm	Active
GW-004010	Monitoring Well T-10 at Plant Farm	Active

Appendix 1

Environmental Monitoring Serial Numbers

GW-004020	Monitoring Well F-0 (Deep) at Salem Farm	Inactive
GW-004021	Monitoring Well F-1 (Deep) at Salem Farm	Inactive
GW-004022	Monitoring Well F-2 (Deep) at Salem Farm	Inactive
GW-004023	Monitoring Well F-3 (Deep) at Salem Farm	Inactive
GW-004024	Monitoring Well F-4 (Deep) at Salem Farm	Inactive
GW-004030	Monitoring Well FM-0 (Shallow) at Salem Farm	Active
GW-0040031	Monitoring Well FM-1 (Shallow) at Salem Farm	Active
GW-004032	Monitoring Well FM-2 (Shallow) at Salem Farm	Active
GW-004033	Monitoring Well FM-3 (Shallow) at Salem Farm	Active
GW-004034	Monitoring Well FM-4 (Shallow) at Salem Farm	Active
GW-004035	Monitoring Well FM-5 (Shallow) at Salem Farm	Active
GW-004036	Monitoring Well FM-6 (Shallow) at Salem Farm	Active
GW-004037	Monitoring Well FM-7 (Shallow) at Salem Farm	Active
GW-004038	Monitoring Well FM-8 (Shallow) at Salem Farm	Active

SUPPLEMENTAL IRRIGATION SAMPLING POINTS

Serial Number	Description
SI-004001	Plant Farm Irrigation Well
SI-004002	Salem Farm Deep Pumping Well "FM-4 Deep"
SI-004003	Salem Farm Canal Irrigation

Appendix 1
Environmental Monitoring Serial Numbers
LAGOONS

Serial Number	Description
LG-004001	North Partition of Concrete Mud Lagoon
LG-004002	South Partition of Concrete Mud Lagoon

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Appendix 2

Site Maps

Site Maps

- a) Figure 1. BAF Plant Farm Map. HDR Figure 1-2, 11/15/2006.
- b) Figure 2. BAF Salem Farm Map. HDR Figure 1-3, 11/15/2006.

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Appendix 2
Site Maps

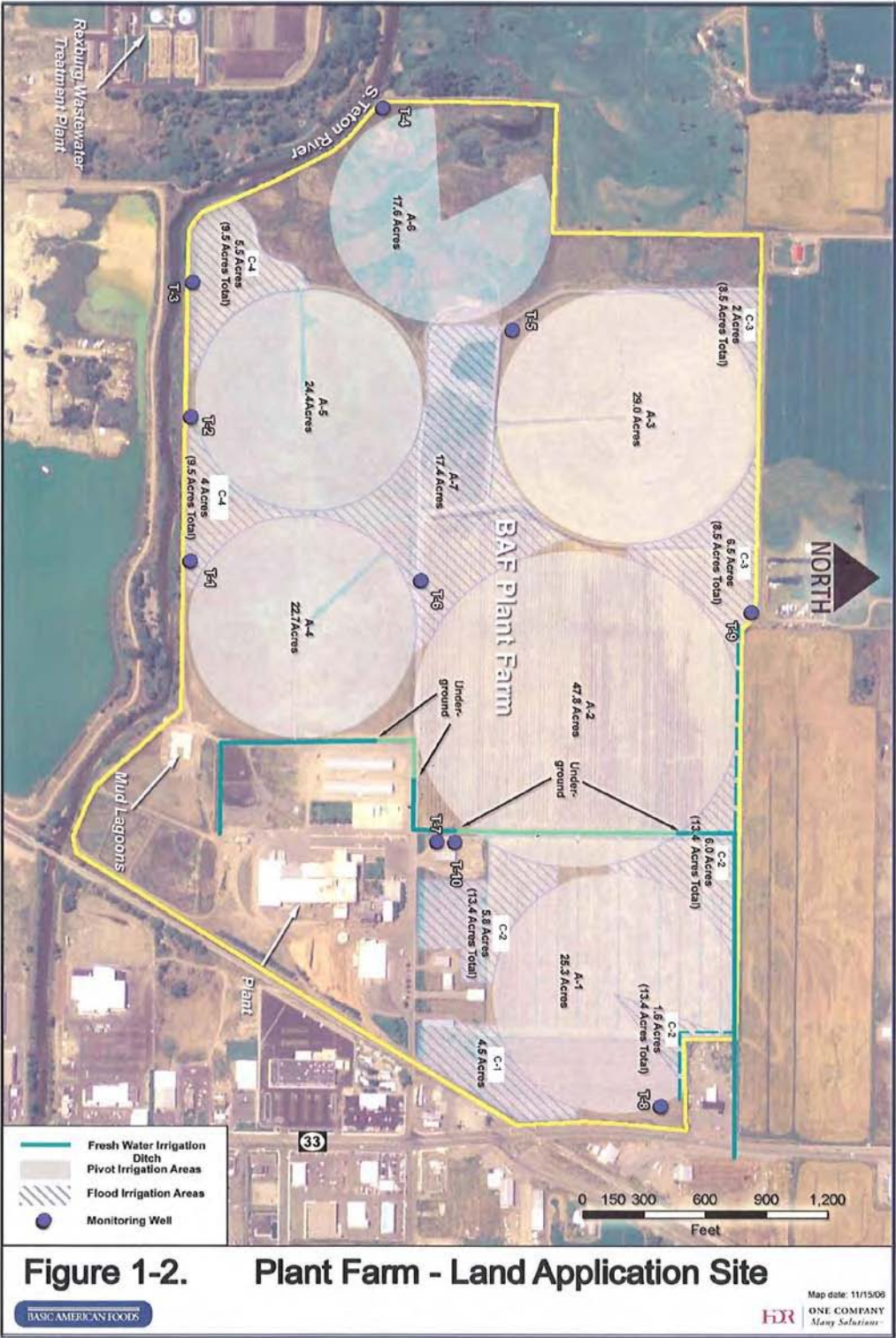
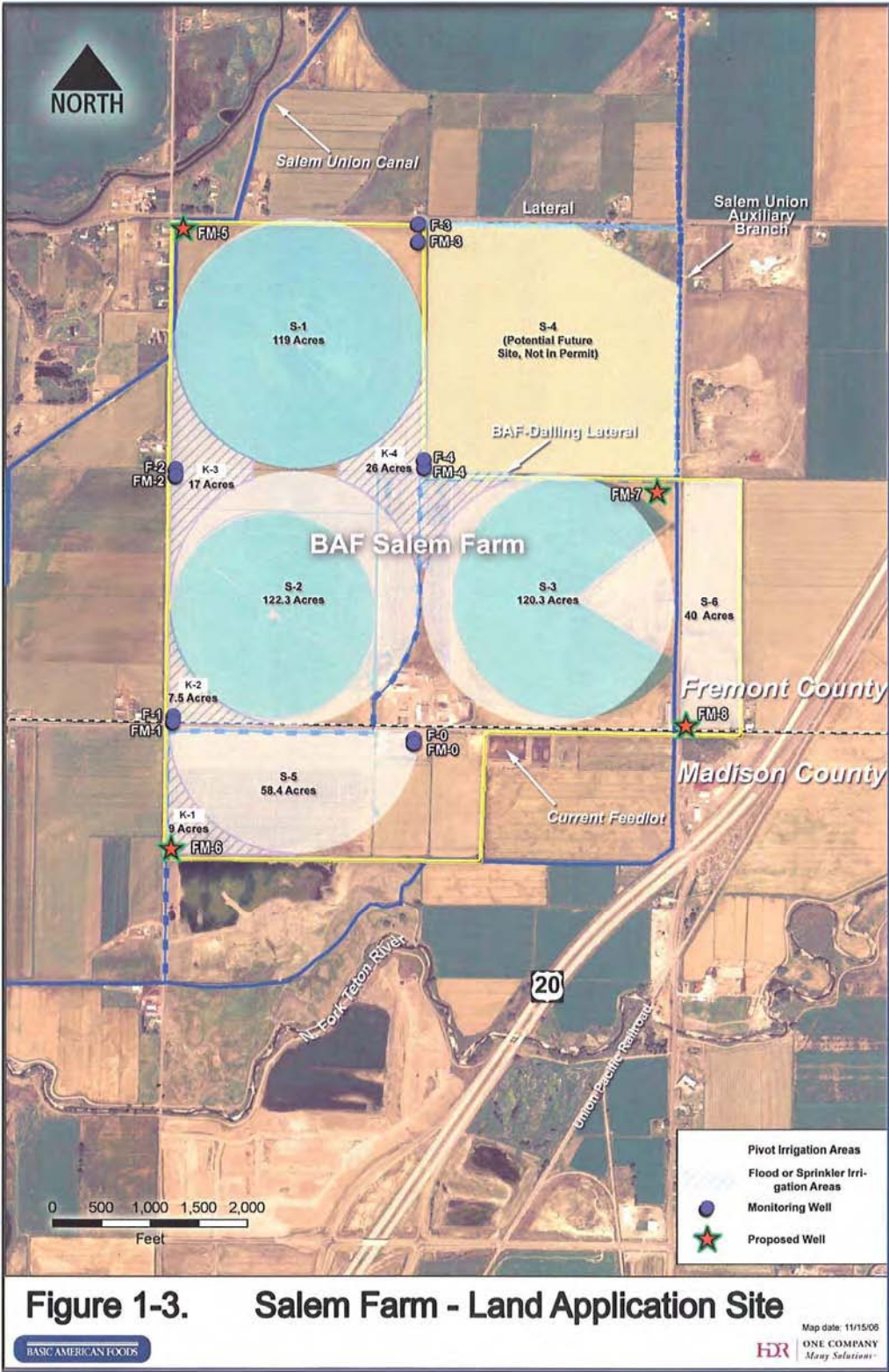


Figure 1. Management Unit Configurations and Well Locations—Plant Farm.

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Appendix 2
Site Maps



Appendix 2
Site Maps

Figure 2. Management Unit Configurations and Well Locations—Salem Farm.

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